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NEW ORIENTAL CICADIDÆ IN THE MUSEUM OF  
COMPARATIVE ZOÖLOGY

BY GAINES KAN-CHIH LIU

WITH SEVEN PLATES

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No. 2. — *New Oriental Cicadidæ in the Museum of  
Comparative Zoölogy*

BY GAINES KAN-CHIH LIU

FOREWORD

Just after passing his Doctor's examination and having finished his thesis, Doctor Liu was required by his Government to return to China.

The thesis, as finished in partial fulfilment of the requirements for his doctorate, contained much material of a general nature and many, many details which had been published and which it was neither desirable nor necessary to publish again.

Since it has been impossible to communicate with Doctor Liu, I asked Mr. Nathan Banks to take this manuscript and indicate those sections which might be considered as new. This he has done with painstaking care and great skill and it is only fair that the part which he has played in making possible the publication of this manuscript should be gratefully acknowledged. Doctor Liu would be the first person to do this were it possible. Since it is not, I do so in his name.

T. BARBOUR.

INTRODUCTION

This study is based on the collections in the Museum of Comparative Zoölogy, supplemented by others made in China during 1931–1933 by the writer, when holding a Parker Fellowship from Harvard University.

I have decided to follow the classification used by Distant for the Cicadidæ in the Fauna of British India. This arrangement is by no means satisfactory; but since Distant's publications are indispensable for the study of the Oriental Cicadidæ, especially the Chinese fauna, it is deemed better for the present not to make any change.

The terminology employed for descriptions in this paper is also practically the same as that of Distant. I have found it convenient to coin a new term, "incisural area," for the description of the markings of the two lateral areas on the disk of the pronotum. These areas, where the so-called "incisures" are located, are usually well defined.

The Chinese Cicadidæ are badly in need of revision. Since Distant's Monograph of Oriental Cicadidæ, the number of species known to occur in China has been more than tripled. The total represents the

efforts of a number of workers of different nationalities. As a consequence, the characters emphasized are different, and each worker seems to have had a different concept of what should constitute a species.

#### ACKNOWLEDGMENTS

The writer is most grateful to Mr. Banks and also wishes to thank Dr. T. Barbour for the opportunity to publish this paper, and Prof. C. T. Brues for his encouragement and interest in his work.

### Genus *PLATYPLEURA* Amyot and Serville

#### *Key to the Species*

1. Mesonotum with three obconical spots.....*semusta*  
Mesonotum with four obconical spots.....2
2. Tegmina and wings with the apical half hyaline and the basal half more or less opaque.....*coelebs*  
Tegmina and wings in general opaque.....3
3. Lateral margins of pronotum rounded; outer margins of wings (excluding anal area) dark brownish; rostrum passing just behind the posterior coxæ.....*hilpa*  
Lateral margins of pronotum angulate; outer margins of the wings hyaline; rostrum extending far behind the posterior coxæ.....4
4. Anal tergite largely exposed, rostrum passing beyond the posterior margin of opercula; abdomen gradually narrowed behind; color brown.....*kæmpferi*  
Anal tergite retracted, rostrum hardly reaching the posterior angle of opercula; abdomen abruptly narrowed behind and shorter than the anterior half of the body; color greenish.....*retracta*

#### *PLATYPLEURA KÆMPFERI* Fab.

##### Plate 1, Fig. 2

Occurs along coastal plain of China as far north as Peiping.

#### *PLATYPLEURA RETRACTA* spec. nov.

##### Plate 1, Fig. 3

The general marking of this species is more or less similar to that of *P. kæmpferi*. But, besides those structural differences, as shown below,



which mark it as a distinct species, the general color is greenish, the abdomen more abruptly narrowed behind and shorter than the anterior half of the body. It is also more pilose.

Head deflected in front and about as wide as the base of mesonotum. Vertex black with the following markings yellowish-green:—four large spots in front of the posterior margin, a transverse fascia between the eyes across the base of the tylus, and a spot on the anterior lateral margin. Tylus yellowish-green with the lateral margin and an angulated transverse fascia fuscous. Antennæ brown. Eyes brown. Ocelli shining red and about twice as far from the eyes as from each other.

Pronotum about three times as wide as long and about as long as mesonotum (excluding cruciform elevation). The lateral margins broadly amplified and angulate in the middle. The disk yellowish-green with a central longitudinal lanceolate fascia and three oblique fasciæ on the incisural area black. The lateral marginal area black with the extreme margins dull ochraceous.

Mesonotum yellowish-green with four obconical fasciæ from the anterior margin and a radiate spot in front of the cruciform elevation black. The anterior arm of the radiate spot extending to the anterior margin and the posterior one to the disk of the elevation. The lateral marginal area of the radiate spot piceous. The extreme lateral margins paler.

Abdomen (9 mm.) much shorter than the anterior half (11 mm.) of the body, abruptly narrowed behind, covered with appressed silvery pile, and dull black with the posterior margins of tergites 3–6 greenish. The inner angle of the tympanal orifice somewhat exposed. Flaps black with the inner marginal area ochraceous. Anal tergite concealed, sometimes with only the apical part projected outside.

Tegmina about one-third longer than the body, a little less than three times as long as wide, with the markings as shown in the figure. Plate 1, Fig. 3. Venation partly greenish and partly brown. Basal cell broadly triangular with the point at the base. Wings fuscous with the outer and the posterior marginal area hyaline. Venation reddish-ochraceous with the median and the cubital vein black and the anal vein pale piceous.

Body beneath with the thoracic part pulverulent. Face black with the lateral transverse stripes reddish-ochraceous and deeply and longitudinally sulcate in the middle. Clypeus black with a short longitudinal spot at the base reddish-ochraceous. Lateral margin of lora, basal segment of rostrum, apices of femora, annulations on tarsi, streaks on anterior femora, and the posterior margin of opercula

ochraceous. Apical segment of rostrum and legs reddish. Abdominal ventrites black.

Opercula broad, overlapping on the inner angles, convex on the outer and posterior margin, and not reaching the posterior margin of the second abdominal ventrite. Rostrum hardly reaching the posterior angle of the opercula. Seventh ventrite with the width of its anterior margin longer than its length (in *kæmpferi*, about as long as). Body length 20 mm. Widest part of pronotum 12 mm. Tegmina length 24 mm.

Holotype male from Mt. Chingchen, Kuanshien, Szechuan, July, 1932, in author's collection. One of the paratypes from the same locality is in the M. C. Z.

PLATYPLEURA RETRACTA OMEISHANA var. nov.

This variety differs from the typical form in the following points: rostrum passing the posterior coxæ but far from the posterior angle of the opercula. The lateral obconical black fascia enclosing a small ochraceous spot near the anterior margin. Transverse stripes on abdominal tergites dilated in the middle. The lateral arms of the radiate spot of the mesonotum isolated to form two small spots in front of the anterior arms of the cruciform elevation.

One male from Mt. Omei, Szechuan, July, 1932.

PLATYPLEURA HILPA Walker

Plate 1, Fig. 4.

Known from Canton, Amoy, and Foochow.

Genus PYCNA Amyot and Serville

*Key to Species*

- Wings black with their outer "fourth" pale hyaline; tegmina pale hyaline with the basal part brownish opaque. . . . . *coelestia*  
 Wings ochraceous with the apical area (sometimes the apex of the anal area too) dark castaneous; tegmina with the basal half opaque but the dark fascia on the apical area more concentrated  
*repanda*

## PYCNA REPANDA Linnæus

Plate 1, Fig. 1

According to Haupt occurs on Mt. Omei, Szechuan.

## Genus POLYNEURA Westwood

This genus contains only one species known from India to Tibet. Its alignment with the last two genera appears to be rather superficial.

## POLYNEURA DUCALIS Westwood

Plate 2, Fig. 7

Reported from Szechuan and Tibet.

## Genus GRAPTOSALTRIA Stal

*Key to Species*

Mesonotum almost entirely black with only two faint obconical fasciæ from the anterior margin; pronotum with the posterior marginal area black; vertex black with four testaceous spots between the eyes; tympanal flaps broader than long. . . *colorata*.

Mesonotum with four large obconical fasciæ from the anterior margin; pronotum with the posterior marginal area olivaceous; vertex with a broad olivaceous fascia between the eyes; tympanal flaps longer than broad. . . . . *tienta*

## GRAPTOSALTRIA COLORATA Stal

Plate 2, Figs. 9, 10

Known from Hangehow and Manchuria.

## GRAPTOSALTRIA TIENTA Karsch

Plate 2, Fig. 8

Occurs only at Mt. Omei, Szechuan.

Genus *CHREMISTICA* Stal*Key to the Species*

1. Opercula about half the length of abdomen; tegmina and wings clear and hyaline; body uniformly ochraceous. . . . . *ochracea*  
Opercula not extending much beyond the base of abdomen; body not ochraceous. . . . . 2
2. Mesonotum castaneous with four obscure slender fasciæ from the anterior margin and a small golden patch of pile on the anterior lateral angles; head castaneous with the ocellar region darker and two paler brownish spots near the anterior margin; tegmina and wings hyaline with the veins on the apical margin infuscated *banksi*  
Mesonotum black without golden patches; head black with some reddish spots but not as in the preceding one; tegmina and wings hyaline, the former on basal two-thirds moderately tinged with ochraceous. . . . . *minuta*

*CHREMISTICA BANKSI* spec. nov.

## Plate 3, fig. 15

A large, dull castaneous, and hairy cicada, easily recognized by the two small golden patches on the mesonotum. Tegmina and wings hyaline with the ambient veins infuscated.

Body above dull castaneous. Head declivous in front, about half as long as the space between eyes, and more narrow than the base of mesonotum. Crown centrally and longitudinally sulcate, dull castaneous with the following markings reddish-ochraceous:—a spot on anterior lateral margin, a large spot in the middle of the lateral area, and a very small spot before the middle of the posterior margin. Antennæ castaneous. Eyes brown. Ocelli reddish and about three times as far from the eyes as from each other.

Pronotum about twice as long as wide and longer than mesonotum with exclusion of the cruciform elevation. Lateral margins amplified and convex. Color uniformly dull castaneous but with the marginal area paler and a faint slender longitudinal central fascia in the middle of the incisural area.

Mesonotum uniformly dull castaneous with two faint, threadlike, and convergent fasciæ from the anterior margin and a small golden patch on the anterior lateral angle. Lateral area of cruciform elevation paler. Posterior lateral margin fringed with long silvery hairs.

Abdomen longer than the anterior half of the body, covered rather thickly with long white hairs on the lateral areas and uniformly black except the tympanal flaps and the posterior lateral part of the second and the eighth tergite. Anal tergite broadly indented on the posterior margin with a large ochraceous spot on the lateral area. Tympanal orifice completely covered.

Tegmina and wings hyaline. Tegmina only a little longer than the body and less than three times as long as wide. Venation fuscous with the apical third infuscated. Basal cell elongate, about twice as long as wide, and with the lower vein curved downward. Wings with the apical margin infuscated and the venation pale brownish.

Body beneath reddish ochraceous and thickly covered with long hairs. Face, the region between the face and the eyes, rostrum, legs, and the first abdominal ventrite castaneous. Apices of femora and bases of tibiæ ochraceous. Face very prominent.

Opercula not reaching the posterior margin of the second abdominal ventrite, parallel laterally, slightly oblique and almost truncate posteriorly, and with the inner angles overlapping. Inner marginal area castaneous. Rostrum passing beyond the posterior coxæ with the base ochraceous. Seventh ventrite slightly sinuate on the posterior margin and almost as long as the preceding two united. Genital plate short and hidden from above by the anal tergite.

Body length 41 mm. Widest part of pronotum 15 mm. Tegmina length 46 mm.

Holotype male from China, in Coll. M. C. Z. Paratypes one female and two males.

This insect is dedicated to N. Banks, curator of insects in the Museum of Comparative Zoölogy, Harvard. It was found in the old Harvard collection, but with no more definite locality than "China." The color of this species is variable. The mesonotum is sometimes black and the anterior disk of pronotum sometimes paler.

## Genus LYRISTES Horvath

### *Key to the Species*

- Opercula long and reaching beyond the middle of abdomen; tegmina hyaline with cross-veins of apical cells 2, 3, 4, 5, and 7 infuscated; pronotum castaneous with the margins and a central longitudinal fascia and two basal spots ochraceous. . . . . *leechi*
- Opercula short and not extending beyond the second abdominal ventrite. . . . . 2

2. Tegmina with the basal third opaque, the rest hyaline with the cross-veins of the first apical cell infuscated; pronotum black with two small spots on the disc and the margins (except the lateral anterior half) black. . . . . *wui*  
Tegmina hyaline. . . . . 3
3. Tegmina without any infuscation on the apical veins, very close to *sinensis*. . . . . *pekinensis*  
Tegmina with cross-veins in the apical area infuscated. . . . . 4
4. Tegmina with cross-veins of apical cells 2, 3, 5, and 7 infuscated; pronotum castaneous with the marginal areas, two basal spots, and a lanceolate fascia in the middle ochraceous. . . . . *flammata*  
Tegmina with cross-veins of apical cells 2 and 3 infuscated. . . . . 5
5. Rostrum reaching behind posterior coxæ; opercula rounded laterally and somewhat pointed posteriorly; pronotum olivaceous with two fuscous stripes on the posterior margin near the lateral angles. . . . . *sinensis*  
Rostrum reaching only the anterior margin of the posterior coxæ, opercula parallel laterally and broadly truncate posteriorly; pronotum smoky pale-ochraceous with four spots from the anterior margin and two longitudinal fasciæ in the middle black  
*altaiensis*

## LYRISTES FLAMMATA Distant

Plate 4, Fig. 18.

From Lushan, Kiangsi.

## LYRISTES SINENSIS Distant

Plate 4, Fig. 19

From Tat-sien-lu, Szechuan.

## GENUS CRYPTOTYMPANA Stal

*Key to the Species*

1. Tegmina darkly infuscated; opercula somewhat pointed, concavely sinuate, and reaching the middle of the third abdominal ventrite; rostrum extending behind the middle coxæ. . . . . *holsti*  
Tegmina hyaline or lightly infuscated. . . . . 2

2. Body above olivaceous; opercula broadly truncate behind and reaching the second abdominal ventrite; rostrum extending to the middle coxæ; tegmina and wings hyaline with the basal portion tinged with pale ochraceous . . . . . *sinensis*  
 Body black or castaneous . . . . . 3
3. Abdomen with a large greyish-white fascia on each lateral area; opercula acute and reaching nearly the posterior margin of the fourth abdominal ventrite; rostrum reaching posterior coxæ; tegmina hyaline with the cross-veins of the second and the third apical cells infuscated . . . . . *acuta*  
 Abdomen black without such white fascia . . . . . 4
4. Opercula concavely sinuate on the posterior margin; tegmina with the post-costal area blackish; rostrum reaching the middle coxæ  
*mandarina*  
 Opercula not concavely sinuate; tegmina with the post-costal area clear . . . . . 5
5. Opercula ochraceous; tegmina with the opaque area not extending beyond the basal cell . . . . . 6  
 Opercula not ochraceous except the marginal areas; tegmina with the opaque area extending beyond the basal cell . . . . . 7
6. Abdomen black with the basal segment narrowly margined with greyish-white pile; opercula broadly rounded behind; size large  
*fascialis*  
 Abdomen black with a narrow white fascia in the middle of the third segment; opercula pointed posteriorly; size smaller . . . . .  
*japonensis*
7. Abdomen (except the last two segments) yellowish-brown at the lateral and posterior margin of each segment; tegmina with the basal third somewhat infuscated . . . . . *santoshonis*  
 Abdomen black; tegmina with the basal fourth opaque . . . . . 8
8. Opercula truncate on the inner side and rounded outside, reaching the middle of the second abdominal ventrite, and with the outer margin ochraceous . . . . . *pustulata*  
 Opercula broadly rounded posteriorly not reaching the posterior margin of the basal segment, and with the posterior and external margin broadly ochraceous . . . . . *dubia*



## CRYPTOTYMPANA MANDARINA Distant

Plate 3, Fig. 13

Reported from Hong Kong and Hainan.

## CRYPTOTYMPANA PUSTULATA Fabricius

Plate 3, Fig. 14

Known from the Coastal Plain as far north as Peiping, and inland to Ichang, Hupeh and Taiynan, Shansi.

## C. PUSTULATA CASTANEA var. nov.

This variety can be readily separated from the typical form by the following points: Opercula uniformly castaneous. Lateral areas of pygofer concolorous with the ventrite, not differently colored as in the typical form. Pronotum with three obscure reddish oblique fasciæ on the incisural area and without ochraceous spots on the lateral margins. The general color of the body is castaneous but much darker above.

A single specimen labeled "China" in Harvard collection. In this variety, the opercula do not extend beyond the posterior margin of the second abdominal ventrite.

## C. PUSTULATA FUKIENENSIS var. nov.

This variety differs from the typical form by having the opercula definitely pointed behind, or somewhat peach-shaped, with the pointed tip just touching the posterior margin of the second abdominal ventrite. The ochraceous region is narrowed down to a slender stripe on the outer margin. One male from Foochow, Fukien.

## Genus PURANA Distant

*Key to the Species*

- Tegmina and wings with the claval area infuscated, cruciform elevation with a large black spot in front. . . . . *davidi*  
 Tegmina and wings with the claval area hyaline; cruciform elevation with two small black spots in front of the anterior arms  
*clarohyalina*



## PURANA CLAVOHYALINA spec. nov.

## Plate 4, Fig. 20

This is a small testaceous cicada with black markings and clear wings. Tegmina are decorated with a series of four fuscous spots in the apical half. It can be easily separated from *dauidi* by having the claval area of both tegmina and wings not infuscated.

Head declivous in front, as long as the space between eyes, and as wide as the base of mesonotum. Vertex reddish-ochraceous with the inner margin of eyes and a radiate spot extending to the anterior lateral margins of the vertex. Tylus with a pale smooth spot on the apex and the lateral striations dark castaneous. Eyes prominent, projecting, and together as wide as the space between them. Ocelli shining and about twice as far from the eyes as from each other.

Pronotum narrowed anteriorly, toothed laterally, amplified at the posterior angles, and shorter than mesonotum with the exclusion of the cruciform elevation. The general color is reddish-ochraceous with the marginal area pale yellow. The margin of the incisural area (except a short part on the posterior side), the extreme posterior and anterior margins, and a central longitudinal fascia (widened at both ends) black. The longitudinal central black fascia enclosing a lanceolate reddish ochraceous fascia in the center. Anterior lateral margins and two spots on the posterior angles castaneous.

Mesonotum reddish-ochraceous with five longitudinal fasciæ from the anterior margin black. The middle one more slender and extending to the cruciform elevation where it branches into three arms, two lateral and one posterior. The two lateral ones are broad and broken and also extend to the posterior margin. The two sublateral ones reach only the middle.

Abdomen (15 mm.) nearly as long as the anterior half of the body, nearly parallel laterally, reddish-ochraceous with the posterior margins castaneous and the lateral areas much paler. Tympanal orifice completely covered. Flaps dull ochraceous. Eighth tergite very small and about as long as the preceding one. Anal tergite retracted and sometimes not visible.

Tegmina and wings hyaline with the venation partly ochraceous and partly fuscous. Tegmina more than three times as long as wide with the cross-veins of apical cells 2, 3, 5, and 7 infuscated. Basal cell oblong with the base wider than the apex. A spot at the apex of radial area brightly ochraceous.

Body beneath pale ochraceous. Face prominent, globose, slightly

longitudinally sulcate in the middle, castaneous with the transverse striations and the lateral and posterior margins ochraceous. The region between the face and the eyes, and part of the lora, black. Legs more or less testaceous with ochraceous streaks. Abdominal ventrites pale testaceous. Tubercles prominent and castaneous.

Rostrum reaching the middle of the base of abdomen with the apex castaneous. Opercula pale ochraceous with the base and the lateral margins pale castaneous. Posterior angles extending beyond the second abdominal ventrite. Inner angles widely separated. Seventh ventrite reddish with the posterior part pale ochraceous and the posterior margin indented in the middle. Genital plate elongate, rounded behind, and wrinkled on the disc.

Body length 29 mm. Widest part of pronotum 10mm. Tegmina length 38 mm.

Holotype male from Foochow, Fukien, in Harvard collection. Two paratypes from the same locality.

### Genus MAUA Distant

#### *Key to the Species*

1. Rostrum reaching the middle of the third abdominal ventrite; opercula about as broad as long; tegmina with four infuscated spots  
*fukienensis*  
Rostrum not passing the posterior margin of the second abdominal ventrite. . . . . 2
2. Opercula much longer than broad; tegmina with the only two infuscated spots in the apical area; size large. . . . . *4-tuberculata*  
Opercula broader than long or as broad as long; tegmina with more than two infuscated spots (WALKER says that the first four cross-veins are clouded with brown but the figure given by DISTANT shows only three fuscous spots). . . . . *albistigma*

#### MAUA FUKIENENSIS spec. nov.

#### Plate 4, Fig. 21

This species is evidently very close to *albistigma* but can be readily separated by the length of the rostrum which reaches the middle of the third abdominal ventrite in this one while in *albistigma*, only the "hind hips." On the other hand, it may be easily confused with the European *Tettigia orni* Linnaeus. The markings on tegmina resemble closely those of *Purana clavohyalina*.

Head declivous in front, shorter than the space between eyes, and wider than the base of mesonotum. Vertex dull ferruginous and decorated with an obscure black mark. Tylus with a shining spot at the apex. Eyes prominent, projecting, and together about as wide as the space between them. Ocelli about twice as far from the eyes as from each other.

Pronotum narrowed anteriorly, sinuate laterally, dilated at posterior angles, nearly three times as wide as long, and shorter than mesonotum with the exclusion of the cruciform elevation. Color reddish ochraceous with the anterior extreme margin black. The extreme posterior margin, two large spots on the marginal area near the posterior angle, lateral margins, and the margins of the incisural areas more or less castaneous. The inner margin of the two incisural areas forming a central lanceolate fascia in the middle, which is ochraceous. Mesonotum reddish ochraceous with five black fasciæ from the anterior margin.

Abdomen (14 mm.) shorter than the anterior half of the body, uniformly ferruginous with some fuscous spots on the deflected lateral areas. Tympanal orifice completely covered. Flaps ochraceous. Eighth tergite very small and shorter than the preceding one. Anal tergite not visible.

Tegmina and wings hyaline. Venation partly ochraceous and partly fuscous. Tegmina more than three times as long as wide with the apex of the radial area ochraceous and the cross-veins of apical cells, 2, 3, 5, and 7 infuscated. Basal cells nearly four times as long as wide. Cross-veins of apical cell 3 and 7 curved.

Body beneath paler in hue. Face prominent, globose and fuscous with the lateral striations and lateral margins ochraceous. Areas between face and eyes black. Rostrum ochraceous with apex fuscous. Legs more or less reddish or reddish ochraceous. Abdomen beneath pale ferruginous with posterior segmental margins ochraceous. Tubercles large, prominent, and uniformly reddish. With the specimen on hand, the lateral area of abdomen sunk in and thus forming two grooves with a central ridge. The tubercles are located in these grooves.

Rostrum reaching the middle of the third abdominal ventrite. Opercula short, reaching as far as the rostrum, with the outer margin nearly straight, inner margin convex, and the inner angles well separated. Seventh ventrite prominently sulcate on the posterior margin.

Body length 28 mm. Widest part of pronotum 11 mm. Tegmina length 40 mm.

Holotype male from Foochow, Fukien, in Harvard collection.

This species displays so close a resemblance to *Purana clarohyalina*,

especially the markings of the body and tegmina, that it may be easily confused. However, in addition to the generic differences and differences in the color markings of the opercula and the abdomen above, there are many other distinguishing characters. For instance, in *P. clavohyalina*, the opercula pass the anterior border of the third abdominal ventrite but the rostrum does not reach the posterior margin of the second ventrite, the cross-veins of apical cells 3 and 7 straight, and the posterior margin of the seventh ventrite only slightly sulcate; while in this one, both rostrum and opercula reach the middle of the third ventrite, cross-veins of apical cells 3 and 7 curved, and the posterior margin of the seventh ventrite prominently sulcate.

### Genus TANNA Distant

#### *Key to the Species*

1. Tegmina and wings with the apical angles piceous; the former with the cross-veins of apical cells 2 and 3 infuscated . . . . . *herzbergi*  
 Tegmina and wings with the apical angles hyaline; the former with two series of infuscated spots on the apical area . . . . . 2
2. Tegmina with the cross-veins of apical cells 5 and 7 more or less parallel to the ambient vein, the third apical cell rectangular, and the basal vein of the fourth one not infuscated; wings with the cross-vein of the first apical cell curved and the second apical cell obliquely truncate at base; size smaller; color paler . . . *japonensis*  
 Tegmina with the cross-veins of apical cells 5 and 7 not parallel to the ambient vein, the third apical cell pointed at base, and the upper arm of the fourth one infuscated; wings with the first cross-vein straight and the second apical cell acutely pointed at base; size much larger; color darker . . . . . *obliqua*

#### TANNA JAPONENSIS Distant

Plate 4, Fig. 23.

Known from Hangchow and Manchuria.

#### TANNA OBLIQUA spec. nov.

Plate 4, Fig. 22

This insect in general appearance is very close to *T. japonensis* except larger and darker and may be easily confused. However, there

are a number of structural differences and it can be easily separated from the Japanese form, as pointed out in the key, by the form of the first cross-vein of the wing.

Body above rusty brown. Head declivous in front, about as long as the space between eyes, and narrower than the base of mesonotum. Vertex green with the inner margin of the eyes (not extending to the front) and two transverse fasciæ black. The anterior transverse fascia enlarged on the anterior lateral margin and again in the middle to include the anterior ocellus. The posterior one does not extend to the lateral margin but is deeply curved and also enlarged in the middle to enclose the two posterior ocelli. Disc sparingly covered with golden pile. Eyes prominent, projecting, and together about as wide as the space between them. Ocelli about twice as far from the eyes as from each other.

Pronotum slightly longer than head, about two-thirds as long as mesonotum (excluding cruciform elevation), distinctly narrowed anteriorly, amplified at the posterior angles, sinuate and rather bluntly toothed laterally. Disc sparingly covered with golden pile, rusty brown with the central longitudinal fascia and the marginal area yellowish green. The extreme anterior and posterior margins, margins of incisural areas, and two large spots near the posterior angle fuscous.

Mesonotum greenish brown with five fuscous longitudinal fasciæ from the anterior margin. The central one extends to cruciform elevation where it is enlarged and encloses two small ochraceous spots. The lateral two also reaching the cruciform elevation but the sub-lateral two the shortest.

Abdomen (23 mm.) much longer than the anterior half of the body, sparingly covered with silvery and golden pile, and rusty brown with posterior segmental margins pale fuscous. Tympanal orifice somewhat exposed externally. Flaps fuscous with the central disc pale ochraceous. Outer margin sinuate. Anal tergite truncate behind and reaching not as far as the genital plate.

Tegmina and wings hyaline. Tegmina more than three times as long as wide with two series of fuscous spots on the apical area. Inner series consisting of five (counting the fork of the second one as two) and the outer one of seven. Venation partly green and partly fuscous with a spot at the apex of radial area bright pale yellow. Cross-veins of apical cells 5 and 7 oblique to the ambient vein and the third apical cell pointed at base. Basal cell about three times as long as wide with the lower vein nearly straight and not curved as in the Japanese

species. Wings with the venation partly greenish, partly ochraceous, and partly fuscous. Cross-vein of the first apical cell oblique and straight and the base of the second one pointed.

Body beneath with the anterior part greenish and the abdominal part pale. Head and thorax beneath, coxæ, femora, middle tibiæ, and opercula yellowish green. Transverse striæ on face, spots on lora and clypeus, a small spot between face and eyes, streaks on legs, and apex of rostrum fuscous. Tarsi and tibiæ of anterior and posterior legs and rostrum ochraceous. Anterior tibiæ and tarsi brown. Abdominal ventrites pale with the first pair of tubercles prominent and brown and the pair on the third segment much smaller and darker.

Opercula greenish with the base and the outer margin fuscous. Posterior angles extending far beyond the second ventrite. Inner angles widely separated. Outer margin convexly sinuate. Rostrum passing beyond posterior coxæ. Seventh ventrite nearly parallel laterally, slightly indented behind, about as long as the preceding one but shorter than the genital plate.

Body length 39 mm. Widest part of pronotum 11 mm. Length of tegmina 44 mm.

Holotype male from Mt. Omei, Szechuan, July, 1932 in author's collection. Six paratypes from the same locality in Harvard collection.

### Genus DUNDUBIA Amyot and Serville

#### *Key to the Species*

Opercula broadly rounded behind and reaching the posterior margin of the sixth ventrite; mesonotum without distinct markings.

*mannifera*

Opercula pointed behind and reaching the posterior margin of the seventh ventrite; mesonotum with two convergent black slender faciæ from the anterior margin; size larger. . . . . *bifasciata*

#### DUNDUBIA MANNIFERA Linnaeus

Plate 5, Fig. 25

Known from many places in China.

#### DUNDUBIA BIFASCIATA spec. nov.

Plate 5, Fig. 24

In size and form, this insect closely resembles *D. mannifera*. The tylus is less prominent but still twice as wide as the anterior lateral



margin of the vertex. It can be distinguished, however, from *mannifera* by the presence of two sharply marked slender fasciæ on the mesonotum.

Body above brownish and sparingly covered with pile. Head declivous in front, about five-sixths as long as the space between eyes, and wider than the base of mesonotum. Tylus twice as wide as the anterior lateral margin of vertex and reddish with a central ochraceous fascia extending to the face. Vertex pale brown, slightly tinged with green, and with the ocellar region castaneous. Ocelli less than twice as far from the eyes as from each other.

Pronotum pale brownish, longer than head, shorter than mesonotum (excluding cruciform elevation), and bluntly toothed on the lateral margins. Extreme posterior margin and a transverse spot before the middle of the posterior marginal area black. Marginal area greenish with two spots near the posterior angle and the anterior lateral angles fuscous.

Mesonotum shining pale brown, with two convergent slender black fasciæ from the anterior margin. Abdomen (22 mm.) longer than, or nearly as long as, the anterior half of the body, and pale brownish above with the tympanal coverings greenish. Eighth tergite pulverulent. Anal tergite not visible.

Tegmina and wings hyaline. Venation ochraceous with the apical portion fuscous. Lower vein of claval area dark fuscous. Some of the veins of wings greenish or green. Tegmina more than three times as long as wide. Basal cell three times as long as wide.

Body beneath duller. Face, lora, and streak on anterior and middle femora pale brownish. Antennæ, apical region of rostrum, tibiæ and tarsi of anterior and middle legs dark fuscous. Basal fascia on face, rostrum, streaks on middle tibiæ, posterior legs, and abdomen beneath ochraceous.

Rostrum passing the middle coxæ. Opercula greenish (in the paratype, the right one fuscous) with the outer margin near the base fuscous, reaching the posterior margin of the seventh ventrite, concavely sinuate near base and then amplified and gradually narrowed toward the apex which is somewhat pointed. Seventh ventrite narrowed posteriorly, produced into two little lobes behind, and longer than the preceding one. Genital plate small and pointed behind.

Body length 40 mm. Widest part of pronotum 13 mm. Length of tegmina 47 mm.

Holotype male from Yungshien, Kwangsi, May, 1932, in author's collection. One male paratype from the same locality in Harvard collection.

## Genus PLATYLOMIA Stal

*Key to the Species*

1. Opercula in male extending back as far as the middle of the abdomen and about as wide at base as on disc of apical area; cross-vein of the second and the third apical cell of tegmina slightly infuscated. . . . . *juno*  
Opercula in male extending far beyond the middle of the abdomen, even sometimes reaching the penultimate segment. . . . . 2
2. Tegmina with the cross-veins of apical cells 2, 3, 5, and 7 infuscated; opercula reaching the last segment of abdomen; tegmina and wings slightly smoky. . . . . *lemoultii*  
Tegmina with the cross-veins of apical cells 2, 3, 5, and 7 either clear, or only the second and the third infuscated. . . . . 3
3. Opercula reaching the apex of abdomen and wider on the disc of the apical area than at base; tegmina and wings hyaline *hainanensis*  
Opercula not reaching the apex of abdomen. . . . . 4
4. Tegmina with the cross-veins of apical cells clear; opercula about reaching the penultimate segment of abdomen and uniformly ochraceous. . . . . *larus*  
Tegmina with the cross-veins of the second and the third apical cell infuscated. . . . . 5
5. Opercula extending to the sixth segment of abdomen and about as wide at base as on the disc of the apical area; tarsi black, size about 50 mm. . . . . *diana*  
Opercula passing the posterior margin of the sixth segment of abdomen and wider on the disc of the apical area than at base; posterior tarsi ochraceous; abdomen ochraceous with the apical half fuscous; size 40 mm. . . . . *kingvosana*

PLATYLOMIA KINGVOSANA spec. nov.

Plate 5, Fig. 26

A large ochraceous species with prominent black markings on mesonotum as described below and the cross-veins of the second and the third apical cell infuscated. It appears to be very close to *diana* which is also described from Szechuan. But a number of structural characters make it distinct from all other members of this genus. The head only a little more than half as long as the space between eyes, pronotum definitely shorter than mesonotum (excluding cruciform



elevation), and abdomen only a little longer than the anterior half of the body. Furthermore, tympanal orifice exposed externally. It appears to stand between *Mcimuna* and *Platylochia*, with the shape of the opercula closer to that of the latter.

Head deflected in front, with its length (5 mm.) only a little more than half as long as the space between the eyes (7 mm.) and about as wide as the base of mesonotum. Vertex ochraceous with the ocellar region and a large oblique fascia on the lateral area black and two small spots on the posterior margin fuscous. The two posterior ocelli separated by a deep sulcus where it is more or less reddish. The two lateral fasciæ more or less connected with the ocellar fascia. Tylus only a little wider than the anterior lateral margin of vertex and black with the base and a spot at the apex ochraceous.

Pronotum longer than head, only three-fourths as long as mesonotum (excluding cruciform elevation), distinctly narrowed anteriorly, sinuate and distinctly toothed laterally. Extreme posterior margin, central part of anterior margin, and the margins of the incisural areas black. The inner margins of the two incisural areas forming a central longitudinal lanceolate fascia on the disk. Lateral incisures and three spots (two large and one small) before the posterior angle fuscous.

Mesonotum ochraceous with three prominent fasciæ from the cruciform elevation black; the central one soon branching into three arms.

Abdomen only about one-seventh longer than the anterior half of the body, collapsed laterally, fuscous with tergites 3, 4, and 5 largely, and 6 partly ochraceous. Tympanal orifice slightly exposed on the inner angle. Flaps pale greenish. Anal tergite not visible. The lateral area (except a spot in the middle) of the third tergite rather thickly covered with silvery pile.

Tegmina and wings hyaline. Venation partly ochraceous and partly fuscous. Basal membrane blackish. Tegmina more than three times as long as wide with the cross-veins of the second and the third apical cells infuscated and a spot at the apex of radial area brightly ochraceous. Basal cell a little more than twice as long as wide.

Body beneath ochraceous. Face moderately prominent, ochraceous, with a central longitudinal fascia brightly castaneous. A spot near antennal insertion, disc of lora, and streaks on coxæ blackish. Apex of rostrum, streaks on legs, and the anterior and middle tarsi dark fuscous or black. Abdomen pale ochraceous with the apical portion piceous. Genital plate dull ochraceous with the apical portion piceous.

Opercula ochraceous with the anterior part of the outer margin dark castaneous and two stripes on the disc blackish with the inner margin

convex and well separated, outer margin concavely sinuate near the base, and the posterior angles broadly rounded and reaching the seventh ventrite. Rostrum reaching nearly behind the posterior coxæ. Seventh ventrite narrowed posteriorly and rather deeply indented behind and a little longer than the preceding one. Genital plate lobate and projecting behind.

Body length 40 mm. Widest part of pronotum 15 mm. Length of tegmina 48 mm.

Holotype male from Mt. Kingfoo, Szechuan, Aug., 1932 in author's collection. Three paratypes from the same locality in Harvard collection. There is some color variation. In paler specimens, the black markings on mesonotum may be much reduced. Apical region of opercula sometimes piceous.

P. KINGVOSANA VIRESCENS var. nov.

This variety differs from the typical form by being definitely green, entire outer margin of opercula black and the inner margin (except the basal part) piceous. This is evidently only a color variation.

Genus MEIMUNA Distant

*Key to the Species*

1. Tegmina hyaline with the cross-veins of the second and the third apical cell not infuscated; opercula in male straight on the inner side, narrowed to apices and reaching the middle of the fifth ventrite; abdomen dull sanguineous. . . . . *tripurasura*  
 Tegmina hyaline but with the cross-veins of the second and the third apical cell infuscated. . . . . 2
2. Opercula hardly reaching the posterior margin of the third abdominal ventrite and rather sharply pointed at the apices  
*opalifera*  
 Opercula passing beyond the posterior margin of the third abdominal ventrite and reaching at least two-thirds the length of the abdomen. . . . . 3
3. Tympanal orifice not completely covered but with a slit on the inside; flaps longer than broad. . . . . *neomongolica*  
 Tympanal orifice completely covered, flaps as long as broad. . . . 4
4. Rostrum passing the posterior coxæ and about reaching the inner angles of opercula. . . . . *mongolica*  
 Rostrum just reaching the posterior margin of posterior coxæ  
*silhetana*

## MEIMUNA OPALIFERA Walker

Plate 5, Fig. 28

Reported from Peiping, Chekiang, Canton, Foochow, and Mt. Kingfoo.

## MEIMUNA NEOMONGOLICA spec. nov.

Plate 5, Fig. 27

This insect seems to be intermediate between *mongolica* and *silhetana*. In these three species, the markings on pronotum, mesonotum, and tegmina are all alike. The shape and the size of the opercula are also more or less similar. The present species is allied to *mongolica* in the size of the body and the markings on abdomen above. On the other hand, it resembles *silhetana* in the length of the rostrum, which reaches only as far as behind the posterior coxæ. It stands aloof from both species by having the tympanal orifice not completely covered. Furthermore, the tympanal flaps are definitely longer than broad.

Body above green or yellowish-green with black markings and sparingly pilose. Head declivous in front, shorter than the space between eyes, and wider than the base of mesonotum. Vertex green with the posterior margin of the eyes, a spot on the anterior lateral angle, and three large spots on the disc (the lateral ones angulate) black. Tylus black with the base and the lateral transverse stripes yellowish green and a spot at the apex ochraceous. Antennæ black. Eyes greyish brown and prominent. Ocelli shining red and about twice as far from the eyes as from each other. The two posterior ocelli separated by a deep sulcus where it is reddish.

Pronotum longer than head, about two-thirds as long as mesonotum (excluding cruciform elevation), narrowed anteriorly, sinuate and distinctly toothed laterally. Color green with the extreme posterior and lateral margins, margins of incisural areas, and lateral incisures black. The inner margins of the incisural areas forming a central longitudinal lanceolate fascia on the disc. Three spots near the posterior angle fuscous.

Mesonotum green with the anterior region more or less ochraceous and with five longitudinal black fasciæ from the anterior margin. The central one enlarged posteriorly and reaching the cruciform elevation. The sublateral ones reaching only the middle and slit. The lateral

ones much interrupted anteriorly. Two spots in front of the cruciform elevation black.

Abdomen (18 mm.) much longer than the anterior half of the body, reddish brown with markings on the anterior margins of tergites 2-6 dark fuscous, and the posterior margins green. The markings are similar to the markings as given by Distant in his figure for *mongolica*. Tympanal orifice is not completely covered but with a slit on the inner side. Flaps greenish and longer than broad. Eighth tergite pulverulent and about twice as long as the preceding one. Anal tergite small, much shorter than the genital plate, bisinuate behind, and greenish on the posterior margin.

Tegmina and wings hyaline with the base greenish. Tegmina more than three times as long as wide with venation partly brown and partly fuscous. Basal cell about three times as long as wide and wider at base. Cross-veins of apical cells 2 and 3 infuscated. Wings with the costal and the lower median vein greenish.

Body beneath paler. Face moderately prominent, black with the lateral striations green, and a spot at the base ochraceous. Cheeks black with the basal portion more or less greenish and the ridge of clypeus ochraceous. A large spot between face and eyes black. Rostrum ochraceous with the apex piceous. Legs greenish ochraceous with the streaks and tarsi piceous. Abdomen beneath with ventrites 2-4 pale piceous, 5-7 pale piceous with the anterior part darker. Genital plate ochraceous.

Opercula broad, moderately long, and reaching the middle of the fifth ventrite. Inner margins well separated, strongly convex about the middle, and then obliquely divergent posteriorly. Posterior inner margin nearly straight. Outer margin concavely sinuate near base and then strongly convex. Posterior angles bluntly pointed. Color slightly greenish with the outer marginal area (except the basal part) piceous. Rostrum reaching just behind the posterior coxæ. Seventh ventrite longer than the preceding one but shorter than the globose genital plate.

Body length 30 mm. Widest part of pronotum 10 mm. Tegmina length 38 mm.

Holotype male from Ichang, Hupeh, June, 1932, in author's collection. Paratype male from the same locality in Harvard collection. The paratype is paler and less greenish. The black area on the face is also greatly reduced.

## Genus POMPONIA Stal

*Key to the Species*

1. Abdomen about as long as the anterior half of the body; tegmina with cross-veins of the second and the third apical cell infuscated; rostrum just reaching the apices of the posterior coxæ. . . . . *scitula*  
Abdomen much longer than the anterior half of the body. . . . . 2
2. Tegmina with the cross-veins of the second and the third apical cell faintly infuscated; rostrum just reaching the apices of the posterior coxæ; opercula widely separated. . . . . *thalia*  
Tegmina with numerous fuscous spots; rostrum extending far beyond the posterior coxæ and reaching the inner angles of opercula; opercula with the inner angles approaching. . . . . *fusca*

## POMPONIA FUSCA Olivier

## Plate 3, Fig. 17

Reported from Kwangtung and Kwansi.

## Genus ONCOTYMPANA Stal

*Key to the Species*

1. Tegmina and wings moderately infuscated; rostrum passing posterior coxæ; cross-veins of apical cells 2, 3, 5, and 7 moderately infuscated; allied to *maculaticollis*. . . . . *fuscata*  
Tegmina and wings hyaline. . . . . 2
2. Abdomen with the posterior margin of tergites 2 and 3, tympanal coverings, disk beneath, and opercula pale bright virescent; tegmina with cross-veins of apical cells 2, 3, 5, and 7 broadly piceous. . . . . *virescens*  
Abdomen with the corresponding parts not so marked; tegmina with cross-veins of apical cells 2, 3, 5, and 7 infuscated; cross-vein of the eighth apical cell at most with only the lower angle slightly fuscous. . . . . 3
3. Tegmina without a series of submarginal fuscous spots, body beneath pale ochraceous. . . . . *coreana*  
Tegmina with a series of submarginal fuscous spots. . . . . 4

4. Opercula either entirely black or with the posterior margin black; size of the body at least 30 mm. long . . . . . *maculaticollis*  
Opercula ochraceous; size of body 26 mm. long; allied to *virescens* but rostrum longer, opercula shorter, and color different. *stratoria*

### ONCOTYMPANA MACULATICOLLIS Motschulsky

#### Plate 3, Fig. 16

Known from Shantung, Kansu, Szechuan, and Hangchow; taken at Chungking, Mt. Omei, Mt. Kingfoo, and Mt. Chingchen, all in Szechuan.

#### *Key to the Varieties*

1. Opercula bicolorous, very close to the typical form . . . . . *variety d*  
Opercula concolorous . . . . . 2
2. Opercula ochraceous . . . . . 3  
Opercula black . . . . . 4
3. Larger forms with the ochraceous area on mesonotum much reduced; ground color of the body ochraceous . . . . . *variety b*  
Smaller forms with the ochraceous area on mesonotum reduced to small spots; ground color of the body black . . . . . *coreana*
4. Abdomen above with a transverse white fascia behind the tympanal coverings . . . . . *variety a*  
Abdomen above without such white fascia, but uniformly black with two spots on the first segment, and the posterior margin of the second segment ochraceous . . . . . *variety c*

#### Variety A

This variety differs from the typical form, besides those mentioned in the key with regard to the color of the opercula, in having the ochraceous area on mesonotum reduced to 10 spots. Abdomen beneath entirely black with the posterior margin of the penultimate segment and the pleurites of the third and fourth segment ochraceous. Abdomen above with a white transverse fascia on the second segment.

#### Variety B

This variety differs from the typical form and other varieties by having the opercula entirely ochraceous and from *coreana* by being larger and paler.

## Variety C var. nov.

This variety differs from other forms by the absence of a white fascia on the abdomen and by having the color smoky. Only one male specimen from Mt. Kingfoo, Szechuan.

## Variety D var. nov.

This variety is very close to the typical form and differs from it by having the fuscous area on opercula much enlarged, abdomen beneath more or less fuscous, and the ochraceous area on mesonotum reduced to ten spots. A large number of specimens in Harvard collection.

## Variety COREANA Kato

After examining a large number of *O. maculaticollis* and noting its variation, one comes to the conclusion that Kato's *coreana* can be regarded only as a variety of this species. (cf. KATO, *Trans. Nat. Hist. Soc. Formosa*, 15, 1925, p. 27.)

## Genus TERPNOSIA Distant

*Key to the Species*

1. Opercula in male extending beyond the posterior margin of the second abdominal ventrite; tegmina with two series of fuscous spots, the inner one on the cross-veins of the apical cells and the outer one submarginal. . . . . *ichangensis*  
Opercula not extending beyond the posterior margin of the second abdominal ventrite; tegmina without a submarginal series of fuscous spots. . . . . 2
2. Abdomen above black with three brown spots on each side; tegmina with the cross-veins of the second and the third apical cell infuscated; opercula short and black. . . . . *obscura*  
Abdomen above either ochraceous or greenish ochraceous with or without black markings; opercula not entirely black. . . . . 3
3. Tegmina with the apical veins to the second and the third ulnar area infuscated; abdomen above virescent with a double discal segmental series of large black spots. . . . . *mawi*  
Tegmina with cross-veins of apical cells 2, 3, and 5 infuscated. . . 4
4. Abdomen above with an oblique submarginal linear broken fuscous fascia; opercula subquadrate and without a basal black fascia. . . . . *andersoni*  
Abdomen without any fuscous fascia; opercula obliquely rounded, somewhat elongate, and with a basal black fascia. . . . . *clio*



## TERPNOSIA ANDERSONI Distant

Plate 6, Fig. 36

Described from Yunnan.

## TERPNOSIA OBSCURA spec. nov.

Plate 6, Fig. 42

This *Terpnosia* can be easily separated from other species by the color of the body above, which is black. Tegmina with venation black and the cross-veins of apical cells 2 and 3 infuscated.

Body above black. Head declivous in front, shorter than the space between eyes, and about as wide as, or wider than, the base of mesonotum. Crown black with some obscure and ill-defined spots and short stripes. Antennæ black. Eyes greyish brown with series of black spots and short stripes. Ocelli shining red and less than twice as far from eyes as from each other.

Pronotum a little shorter than mesonotum (excluding cruciform elevation), as long as head, a little more than twice as wide as long, with the lateral margins deeply sinuate in the middle and the posterior angles amplified. A well defined but rather obscure central longitudinal fascia, a large spot on anterior lateral angle, and a large spot near the posterior angle reddish testaceous. Mesonotum black with four oblique and obscure reddish fasciæ from the anterior margin. Two small circular spots in front of the cruciform elevation pitchy black. Cruciform elevation reddish brown.

Abdomen (15 mm.) about one-third longer than the anterior half of the body, black with the following markings reddish:—two spots on the anterior margin of the second segment, a transverse stripe on the basal part of tympanal flaps, two large spots (the outer one ill-defined) on each side of tergites 3–5, an obscure spot on the fifth tergite, and the posterior margin of tergites 3–6. Eighth tergite suddenly constricted with the posterior half densely covered with short silvery pile. Anal tergite prominent, cleft behind with the two lateral parts produced into sharp spines pointed upward.

Tegmina and wings hyaline. Venation fuscous. Tegmina three times as long as wide with the cross-veins of apical cells 2 and 3 and the apical part of the marginal vein of anal area infuscated. A spot at the apex of radial area ochraceous. Basal cell twice as long as wide. Venation of wings blackish brown with the lower median, the cubital, and the anal vein black.



Body beneath piceous with the anterior half more thickly pilose. Face moderately prominent, oblong, and black with the lateral area paler. Lateral striations not distinct. The region between the face and eyes, disc of lora and clypeus, apex of rostrum, opercula, and base of abdomen black. Legs reddish brown with streaks of various shades of castaneous. Apices of femora and bases of tibiæ ochraceous. Abdomen beneath pale piceous.

Opercula not reaching the posterior margin of the second abdominal ventrite with the outer margin slightly convex, posterior margin slightly oblique and nearly straight, and the inner margins well separated. Rostrum just reaching the posterior coxæ. Seventh ventrite depressed on the posterior part of the disc, concave on the posterior margin, longer than the preceding one but shorter than the genital plate.

Body length 26 mm. Tegmina length 25 mm. Widest part of pronotum 7 mm.

One male from Wuchang, Hupeh, May, 1932, in author's collection.

TERPNOSIA ICHANGENSIS spec. nov.

Plate 6, Fig. 43.

This insect is chiefly characterized by the two series of fuscous spots on tegmina and by the length of opercula which extend beyond the second abdominal ventrite. In general appearance, size, and also more or less the markings on the tegmina, it closely resembles *nigrocosta* Motschulsky from Japan (DISTANT, *Mon. Orient. Cicad.*, 1892, p. 138).

Body pale reddish brown and covered with silvery pile. Head declivous in front, as long as the space between eyes, and a little narrower than the base of mesonotum. Vertex suffused with piceous red and with two ill-defined transverse black fasciæ (more or less connected laterally). The anterior one enlarged laterally but does not extend to the lateral margin. The posterior one fainter and more or less interrupted. An ill-defined transverse fascia behind the ocelli greenish ochraceous. Tylus suffused with red and with a reddish ochraceous central fascia extending to the face. Antennæ castaneous. Eyes brown, prominent, and projecting. Ocelli shining red and more than twice as far from the eyes as from each other.

Pronotum a little more than twice as wide as long, longer than head, shorter than mesonotum (excluding cruciform elevation), distinctly

narrowed anteriorly, and with the lateral margins indented at the middle, and amplified both at the posterior and anterior angles. The marginal area, a central longitudinal lanceolate fascia, and four more or less ill-defined short fasciæ on the disc reddish ochraceous. Two central longitudinal fasciæ (enlarged and connected both anteriorly and posteriorly), extreme margins (except the posterior angle), and the outer margin of the incisural areas more or less dark castaneous. Incisural areas paler.

Mesonotum greenish ochraceous with seven longitudinal fasciæ from the anterior margin dark castaneous. The central one slender and reaching the cruciform elevation. The next two convergent, enlarged posteriorly and hook-like, and reaching only as far as the middle, the third pair very short, the outermost pair prominent, enlarged and forked posteriorly, and reaching the cruciform elevation.

Abdomen (18 mm.) one-third longer than the anterior half of the body and reddish brown with the lateral areas paler. Eighth tergite suddenly constricted, as long as the preceding one, castaneous with the posterior half paler. Anal tergite as long as the preceding one, reddish brown with a castaneous spot on each side, produced into a dorsal spine posteriorly.

Tegmina and wings hyaline. Tegmina more than three times as long as wide. Venation partly ochraceous and partly fuscous with a spot at the apex of radial area bright. Costal membrane greenish ochraceous. Basal cell longer than broad. Cross-veins of apical cells 2, 3, 4, 5, and 7 infuscated. A series of submarginal spots fuscous. Venation of wings fuscous with the basal part of the lower median vein ochraceous.

Body beneath paler with the anterior half reddish. Face moderately prominent, dark castaneous with the lateral transverse stripes, a central longitudinal fascia, and the lateral margins reddish ochraceous. Clypeus dark castaneous with two spots on the ridge reddish ochraceous. A large spot between the face and the eyes and the disc of lora black. Apex of rostrum castaneous. Legs reddish with the apices of femora ochraceous. Abdomen beneath pale ochraceous with the last segment and the genital plate darker.

Opercula with the posterior angle extending just beyond the posterior margin of the second abdominal ventrite. Outer margin slightly convex. Posterior margin oblique and nearly straight. Inner angles well separated. Rostrum reaching behind the posterior coxæ. Seventh ventrite slightly sinuate behind, wrinkled on the posterior half of the disc, longer than the preceding one but as long as the genital plate.

Body length 31 mm. Tegmina length 33 mm. Widest part of pronotum 9 mm.

One male from Ichang, Hupeh, in Harvard collection.

Genus LYCURGUS China

LYCURGUS SUBVITTA Walker

Plate 6, Fig. 35

Recorded in Wu's Catalogue from "China."

Genus GÆANA Amyot and Serville

*Key to the Species*

Rostrum reaching just behind the middle coxæ; black with the apical part dark fuscous; wings with basal half stramineous and the remaining area dark fuscous but without a series of sub-marginal spots . . . . . *vestita*

Rostrum reaching posterior coxæ, tegmina black with the apical region paler, wings black with a basal patch and a series of sub-marginal spots ochraceous . . . . . *maculata*

GÆANA MACULATA Drury

Plate 2, Fig. 11

Taken at Kweiping, Kwansi; known from many places in China.

GÆANA MACULATA CONSORS Walker

This variety differs from the typical form in the color of tegmina and wings being replaced by pale greenish, and also by the size of the basal spot on wings, which occupies nearly half the area. It also has two ochraceous stripes on the posterior margin of the seventh ventrite and does not have the ochraceous spots on the lateral margin of mesonotum. The female also has two series of reddish spots on abdomen beneath.

The material at hand came from Lamin, Assam.

G. MACULATA BARBOURI var. nov.

This variety is characterized by being entirely pale reddish brown with the anterior half of the body castaneous and by the absence of

ochraceous markings on the seventh ventrite. Tegmina and wings pale brown with venation reddish. The basal patch on wings greatly reduced. Posterior margins of abdominal tergites 3-7 (except on the lateral areas and the last segment) concolorous in the middle. Two Chinese specimens in Harvard collection. This variety is dedicated to Dr. Barbour, director of the Museum of Comparative Zoology at Harvard College.

G. MACULATA DISTANTI var. nov.

Plate 2, Fig. 12

This variety is characterized by the presence of a series of faint short transverse narrow bands on abdomen beneath and by having tegmina and wings piceous with prominent black venation. Basal patch of wings greatly reduced. One male specimen from Hongkong.

Genus MOGANNIA Amyot and Serville

*Key to the Species*

1. Body and legs brightly shining indigo-blue; head strongly pilose.
 

	<i>cyanea</i>
Body and legs not indigo-blue.....	2
2. Tegmina with the basal third more or less irregularly suffused with greenish or ochraceous but without any traces of fuscous; body and legs pale greenish or ochraceous.....*hebes*

Tegmina with the basal half either shining black, fuscous, or with a broad transverse fascia which is more or less margined with fuscous.....	3
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3. Tegmina with a broad transverse fascia which is ochraceous, oblique, widened posteriorly, more or less margined with fuscous, and across the end of the radial area to the inner margin; body and legs pale castaneous and pilose.....*nasalis*

Tegmina with the basal half either fuscous or shining black; body and legs black.....	4
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4. Tegmina with the basal half fuscous and semi-opaque, extending from the end of the radial area to a little beyond the apex of the interior ulnar area; body above with a more or less defined and broken longitudinal central fascia extending from the apex of head to the apex of abdomen.....*conica*

Tegmina with the basal half shining black, containing a transverse hyaline fascia which occupies the basal half of the radial area and terminating beneath the basal cell; body above with a broad central longitudinal fascia but not extending to the apex of head.

*mandarina*

MOGANNIA CYANEA Walker

Plate 6, Fig. 32

Occurs at Yungshien, Kwansi; known from North China.

MOGANNIA CYANEA YUNGSHIENENSIS var. nov.

Plate 6, Fig. 33

This variety differs from the typical form in having the fuscous band in the middle of the tegmina extending to the posterior margin and connected with the basal fuscous area by a narrow fuscous band on the claval margin. Costal vein and costal membrane also fuscous. Apical third of tegmina pale smoky. Abdomen above without tufts of white hairs. The color of the body is variable, one of the specimens looks dark sanguineous on the front of the head, the posterior legs, and the anterior femora.

Three females from Yungshien, Kwangsi, May, 1933.

MOGANNIA HEBES Walker

Plate 6, Fig. 34

Described from North China; occurs as far south as Canton, and west to Mt. Omei, Szechuan.

Genus HUECHYS Amyot and Serville

*Key to the Species*

Pronotum with a distinct central fascia.....*hamatica*  
 Pronotum concolorous.....*sanguinea*

HUECHYS SANGUINEA Degeer

Plate 6, Fig. 29

Known from Canton, Macao, and Yungshien, Kwansi; and Hangchow and Soochow, also Ichang, Hupeh.

## H. SANGUINEA PHILEMATA Fabricius

This variety differs from the typical form in the color of tegmina, which are fuscous but not black. The wings are also paler but occasionally may be more fuscous than the wings of the typical form. Two specimens from Wuchow and two from Yungshien.

## H. SANGUINEA var. B Distant

This variety is characterized by the presence of greyish streaks on the apical and the ulnar area of tegmina. The number and size of these streaks vary among different specimens; sometimes they may be reduced to a few spots and sometimes present a series of longitudinal stripes. Distant points out that the wings are blackish with greyish white streaks. The wings of the specimen on hand are smoky or blackish but show no sign of these greyish streaks. Three specimens from Yungshien, one from Foochow, one Tonking, two in Harvard collection without definite locality except "China." Both Foochow and Tonking are new records for this species.

## H. SANGUINEA WUCHANGENSIS var. nov.

Very close to *philemata* but differing in having the middle femora much darker or almost black while the anterior and the posterior ones bright castaneous. Tegmina still paler. Head and mesonotum black except the regular sanguineous spots of the species. Pronotum, sternites, opercula, and anal segment of abdomen ochraceous. The insect is smaller and more slender than the typical form or other varieties. Only one male specimen from Wuchang, Hupeh. This is also a new record for this species.

## H. SANGUINEA OCHER var. nov.

In this variety, the sanguineous part of the body of the species is replaced by ochraceous. Tegmina black with a few greyish white spots. Size larger and more robust. One female from Foochow, Fukien.

## HUECHYS HEMATICA Distant

Plate 6, Fig. 30

Occurs at Yungshien, Kwansi, and others labelled "China."

## Genus SCIEROPTERA Stal

## SCIEROPTERA SPLENDIDULA Fabricius

## Plate 6, Fig. 31

Occurs at Pinglo, Kwansi; others labelled "China."

## Genus LISU gen. nov.

This genus in general appearance, resembles some of the *Pomponia* in *Cicadina*. According to the form of its abdomen, it is closer to the *Chlorocystini* but the texture of tegmina and the form of the genital appendages favor its association with the present tribe. Here it differs from all other members of the tribe by the form of pronotum, which is narrowed gradually toward the head, by the color of the base of wings and tegmina, which is not sanguineous, and also by the length of the crown, which is longer than broad. The eyes are also very prominent and together about as wide as the space between them. It is very close to the American *Okanagana* (*Ann. Mag. Nat. Hist.*, **16**, 1905, p. 23).

Head including eyes narrower than the base of mesonotum (excluding cruciform elevation), much longer than the space between eye, and shorter than pronotum. Pronotum distinctly narrowed anteriorly. Abdomen slightly longer than the anterior half of the body, more or less triangular with a broad dorsal central longitudinal ridge and with the anal appendages prominent. Tegmina about three times as long as wide, talc-like, wrinkled, and with eight apical cells. Opercula very small and narrow. Anterior femora spined beneath. Tympanal orifice completely exposed. Type species *L. neokanagana* spec. nov.

This new genus is close to *Okanagana* in the sulcation of the face, the size and shape of opercula, the relative length of rostrum, the relative length of the tylus of head, the relative length of the basal cell of tegmina, and also by the construction of the anterior lateral margin of vertex over the antennæ.

The genus is dedicated to Lisu who was one of the best Chinese entomologists in the sixteenth century.

## LISU NEOKANAGANA spec. nov.

## Plate 6, Fig. 41

This cicada can be easily recognized by the form of the body, which is moth-like, and by the tegmina which are greenishly tinged, wrinkled, and talc-like. The body attenuated both anteriorly and posteriorly.



Body sparingly covered with silvery pile with the anterior half yellowish green and the abdominal section brownish. Head much narrower than the base of mesonotum, longer than the space between eyes, and shorter than pronotum. Vertex a little longer than broad with the anterior lateral margin almost conically dilated. Color yellowish green with the ocellar region and some stripes on the lateral area black or fuscous. Tylus yellowish green with the anterior margin fuscous. Eyes rusty brown, very prominent, and almost as wide as the space between them. Ocelli prominent and as far from the eyes as from each other.

Pronotum as long as mesonotum (excluding cruciform elevation), deflected laterally, amplified at posterior angles, and gradually narrowed anteriorly. A longitudinal sulcus extending from the anterior half over the crown to the face beneath. Color yellowish green with the posterior angles, two stripes on the lateral marginal area, the lower part of the incisural areas and a large stellate central spot on the posterior half of the disk more or less fuscous. The stellate spot much darker.

Mesonotum yellowish green with four large obconical fasciæ from the anterior margin, two small spots in front of the cruciform elevation, and a large spot on the disc of cruciform elevation fuscous.

Abdomen (12 mm.) as long as the anterior half of the body, compressed laterally, gradually attenuated posteriorly, constricted suddenly in the middle of the eighth segment, and with the anal appendages prominent. Color brownish, more thickly covered with silvery hairs, and four series of fuscous spots on each side. The lower three spots on the second tergite fused to form a transverse fascia. Eighth tergite with the anterior half glabrous, slightly indented in the middle of the posterior margin, and twice as long as the preceding one. Anal tergite deeply excavated behind with the two lateral lobes encircling the genital organ, and extending not as far as the genital plate beneath.

Tegmina three times as long as wide, greenish-tinged, talc-like, wrinkled, and with a series of six fuscous spots in front of the ambient vein. Venation brown. Costal membrane fuscous. Basal cell elongate and wider at base. Basal membrane blackish with the lower margin reddish. Wings hyaline with venation ochraceous. Margin of anal area and veins of claval area more or less pale fuscous.

Body beneath dull ochraceous. Face moderately prominent with the anterior half obliquely deflected, longitudinally sulcate in the middle, and yellowish green with the lateral transverse striations fuscous.



Antennæ fuscous and inserted in a hood formed by the anterior lateral margin of vertex. Lateral margin of the cheek, rostrum, legs, thoracic parts beneath, opercula, and abdomen beneath ochraceous. The abdominal part, except the genital plate, darker. The region between the face and eyes, annulation and spots on legs, two spots on mesosternite and some spots on abdominal ventrites more or less fuscous. The two mesosternal spots large, darker, and prominent. Anterior femora beneath provided with three spines.

Opercula short, narrow, and more or less pointed. Outer margin oblique and slightly sinuate near base. Rostrum reaching the middle coxæ. Seventh ventrite attenuated posteriorly, rounded behind, and twice as long as the preceding one. Genital plate longer than the preceding two united.

Body length 25 mm. Tegmina length 33 mm. Widest part of pronotum 9 mm.

One male specimen from Mt. Chingchen, Kuanshien, Szechuan, July, 1932, in the author's collection.

## Genus MELAMPALTA Kolenati

### *Key to the Species*

1. Tegmina with cross-veins of the second and the third apical cell infuscated; pronotum sinuate and angulate laterally. . . . . *bifuscata*  
Tegmina with the cross-veins of apical area not infuscated; pronotum not angulate laterally. . . . . 2
2. Mesonotum ochraceous with four obconical black fasciæ from the anterior margin; abdomen more or less ochraceous with the posterior segmental margins not distinctly marked. . . . . *pellosoma*  
Mesonotum not so colored and marked; abdomen with the posterior segmental margins usually differently marked. . . . . 3
3. Mesonotum with five longitudinal fasciæ (the central one narrow and the lateral four broad); abdomen with posterior half of each segment above yellowish red and the eighth tergite as long as the preceding two united. . . . . *neocruentata*  
Mesonotum and abdomen not so colored and marked. . . . . 4
4. Abdomen above dull black with the lateral area more or less dull yellowish; opercula with the base fuscous, head black with an olivaceous spot at the apex of tylus. . . . . *ishshikii*  
Abdomen above black with the posterior segmental margins variously marked. . . . . 5

5. Mesonotum ochraceous with the disc of cruciform elevation black; the lateral margins and two discal spots reddish ochraceous. Head black with a reddish ochraceous spot on the posterior margin.....*inglisi*  
 Mesonotum black with a few spots, head black with the anterior lateral margin usually colored.....6
6. Pronotum with the central longitudinal fascia enlarged posteriorly.....7  
 Pronotum with the central longitudinal fascia not enlarged posteriorly.....8
7. Abdomen above with the central portion of posterior segmental margins reddish; opercula black; pronotum with the anterior and the posterior margin reddish.....*megerlei*  
 Abdomen above with the posterior segmental margins reddish; opercula reddish; a short longitudinal fascia on pronotum, some spots on head, and two small spots on mesonotum reddish.  
*dimissa*
8. Pronotum with the central longitudinal fascia enclosing two small black spots; opercula piceous with the margins testaceous.  
*mogannia*  
 Pronotum with the central longitudinal fascia enclosing one black spot in the enlarged part.....9
9. Mesonotum with two central longitudinal fasciæ, each enclosing a black spot; head with the apical margin of the tylus and the anterior lateral margin of vertex testaceous.....*soulii*  
 Mesonotum with only two small spots.....10
10. The length of the fusion of the veins more than half as long as the basal cell of tegmina which are nearly straight on the anterior margin; head including eyes narrower than the base of mesonotum and about half as long as wide (including eyes)....*wulsini*  
 The length of the fusion of the veins very short, at most about one-fifth as long as the basal cell, sometimes the radial vein and the ulnar vein only approaching. Tegmina with the anterior margin more or less convex; head including the eyes about as wide as the base of mesonotum and less than half as long as wide (including eyes).....*radiator*

## MELAMPALTA NEOCRUENTATA spec. nov.

## Plate 6, Fig. 37

In general appearance, color and markings of body above, and shape and size of opercula, this cicada is very close to *cruentata* Fabricius from New Zealand (*vide* Stal, *Hem. Fab.* 2, 1869, p. 116). However, it can be readily separated by the following characters. Size larger, wings more elongate, penultimate abdominal segment longer than the preceding two united, genital plate larger and more broadly rounded posteriorly, and abdomen above without a longitudinal central dorsal line of silvery pile.

This is a small reddish cicada and covered thickly with appressed silver pile. General form of the body truncate in front and pointed behind. It can be separated from other related species known to occur in China by the presence of five black longitudinal fasciæ on mesonotum and two circular small spots in front of cruciform elevation.

Head declivous in front, shorter than the space between eyes, and wider than the base of mesonotum. Vertex black with the anterior lateral margin and a spot on the posterior margin reddish. The anterior lateral margin slightly ridged and upwardly convex. Tylus small, only a little wider than the anterior lateral margin of vertex, and black with the anterior margin and a central longitudinal fascia reddish. Antennæ black. Eyes greyish brown and speckled anteriorly. Ocelli shining red and about as far from the eyes as from each other.

Pronotum deflected laterally, dilated at the posterior angle, longer than head, as long as mesonotum including the cruciform elevation, reddish with a median spot in front of the posterior margin; an ill-defined spot on the posterior angle, and the lateral incisural areas black or dark fuscous. The black area on the incisural disc broken. A longitudinal sulcus extending from pronotum over crown to face beneath.

Mesonotum reddish with the following markings black: four broad and large obconical fasciæ from the anterior margin, a central and slender fascia from the cruciform elevation, and two small circular spots in front of cruciform elevation. The two lateral fasciæ extend to the anterior arms of the cruciform elevation which is fuscous.

Abdomen (8 mm.) about as long as the anterior half of the body (or slightly longer), gradually attenuated posteriorly, and with the tympanal orifice entirely exposed. Eighth tergite longer than the preceding two united and the anal tergite produced into a strong spine behind. The predominant color of abdomen above is black but nearly the posterior half of each segment (except the first one) reddish.

Tegmina hyaline and about three times as long as wide. Venation greenish ochraceous with the apical half fuscous. Basal cell much longer than wide and wider at base. The fusion of the radial vein with ulnar vein about two-thirds as long as the basal cell. Basal membrane reddish. Wings hyaline. Venation ochraceous with apical half fuscous.

Body beneath reddish. Face reddish with transverse lateral striations black. Antennæ, cheeks, the region between face and eyes, and a large spot in the middle of the first two abdominal segments beneath black. Rostrum, tibiæ, tarsi, and femora of anterior legs, streaks on anterior coxæ, and streaks on middle and posterior legs castaneous. Bases of opercula piceous. Opercula, genital plate, lateral area of the second abdominal ventrite, lateral areas of the sternites, and lateral stripes on anterior coxæ and femora more or less slightly reddish ochraceous. Abdomen beneath reddish.

Opercula short, widely separated, with the outer margin sinuate near base, posterior margin slightly convex, and the inner angles rounded. With the specimen on hand, the posterior margin does not reach the second abdominal ventrite. Rostrum just reaching the middle coxæ. Genital plate about as long as the preceding one, elongate-ovate, and not projecting beyond the appendages as it is in *cruentata*.

Body length 17 mm. Tegmina length 20 mm. Widest part of pronotum 5 mm.

One male specimen from Mt. Kihua, Anhwei, 1932, in author's collection.

#### MELAMPSALTA BIFUSCATA spec. nov.

#### Plate 6, Fig. 40

This cicada is evidently allied to the European species, *M. adusta* Hagen, by the infuscation of the first two cross-veins of tegmina (Melichar, *Cicad. Mit.-Eur.*, 1896, p. 9). According to Melichar's description, the markings on the mesonotum also seem to be similar. But the most remarkable character of this new species is the angulation of the lateral margins of pronotum.

A small black cicada, covered with erect long hairs and with the first two cross-veins of tegmina infuscated. Head declivous in front, about as long as the space between eyes, and narrower than the base of mesonotum. Vertex black with an ochraceous spot before the middle of the posterior margin. Tylus black with an ochraceous spot at the apex and only a little wider than the anterior lateral margin of vertex.

Antennæ black. Eyes brown. Ocelli shining red and about as far from the eyes as from each other.

Pronotum longer than head, shorter than mesonotum (including cruciform elevation), a little narrowed anteriorly, amplified at the posterior angle, and strongly angulately produced in the middle of the lateral margin. Color entirely black with the posterior margin reddish, an anterior central longitudinal short fascia, and three small spots arranged in a triangle before the middle of posterior margin ochraceous. Mesonotum black with the following markings ochraceous:—anterior lateral margin, posterior margin, two small angulate spots on the disc, and the lateral arms of cruciform elevation.

Abdomen (10 mm.) a little longer than the anterior half of the body, pointed behind, and entirely black with the posterior margins of the segments above (except the first two) narrowly ochraceous. Tympanal orifice entirely exposed. Eighth tergite about as long as the preceding two united. Anal tergite produced behind into a strong spine.

Tegmina hyaline, less than three times as long as wide, and the first two cross-veins of apical area infuscated. Costal membrane warm ochraceous. Basal membrane red. Venation greenish ochraceous with the apical half fuscous. Basal cell about twice as long as wide and wider at base. The fusion of the radial vein with ulnar vein very short, not more than one-fifth as long as the basal cell. Wings hyaline. Venation fuscous. Margins and veins of claval area more or less infuscated. The base of the fourth apical cell also infuscated.

Body beneath black and more longly pilose. Lateral margin of face, streaks on femora, margins of pro- and mesopleurites, margins of coxal cavities, and the posterior margins of abdominal ventrites (except the first one and the seventh one) more or less red. Apex of coxæ, femora, and tibiæ ochraceous. Opercula with the basal half piceous, the apical half reddish, and the marginal area paler. Rostrum black with the base paler.

Opercula about reaching the posterior margin of the second abdominal ventrite with the outer margin sinuate near base, posterior margin convex, and inner angles rounded. Rostrum just passing the middle coxæ. Seventh ventrite depressed on the disc of the posterior third and longer than the genital plate.

Body length 21 mm. Tegmina length 25 mm. Widest part of pronotum 8 mm.

One male specimen from Ta-t sien-lu, Szechuan, Aug. 31, 1905, in Harvard collection.

## MELAMPSALTA RADIATOR Uhler

Plate 6, Fig. 39

From Mukden, Manchuria and Shoutsu, Corea.

## MELAMPSALTA WULSINI spec. nov.

Plate 6, Fig. 38

Superficially speaking, this small black cicada is very similar to *M. radiator*. This is especially true with regard to the size, general color, and the markings of the body, both above and beneath. The claval vein of the wings also infuscated. But it can be separated easily by a number of structural differences. For instance, in this new species, the head including the eyes is much narrower than the base of mesonotum, the fusion of the radial vein with ulnar vein is much longer than the apical cross-vein of the basal cell, the genital plate is globose, and the seventh ventrite is much shorter than the preceding three united. In *radiator*, the genital plate is more or less elongate.

Head declivous in front, shorter than the space between eyes, and narrower than the base of mesonotum. Vertex black with a spot before the middle of the posterior margin and the anterior lateral margin reddish ochraceous. Anterior lateral margin a little convex. Tylus black with a central longitudinal fascia reddish ochraceous. Eyes brown. Ocelli dull red and about as far from the eyes as from each other.

Pronotum longer than head, about as long as mesonotum (excluding cruciform elevation), narrowed anteriorly, deflected laterally, and amplified at the posterior angle. Color entirely black with the anterior and posterior margins, a central longitudinal fascia (not reaching the margins in both directions and a little constricted on posterior third), and two angular spots before the posterior margin reddish ochraceous. The lateral marginal area more or less piceous.

Mesonotum entirely black with the anterior lateral margin, two small angulate spots on the disc, and the lateral arms of cruciform elevation reddish ochraceous. Posterior lateral margins piceous.

Abdomen (11 mm.) as long as the anterior half of the body, gradually attenuated posteriorly, and the tympanal orifice entirely exposed. Anal tergite produced into a strong spine. Eighth tergite shorter than the preceding two united. Color of abdomen above entirely black with the posterior margins of tergites 3-8 very narrowly ochraceous. Anal tergite black with the lateral areas ochraceous.



Tegmina and wings hyaline. Tegmina less than three times as long as wide with the anterior margin nearly straight. Costal membrane brown. Post-costal membrane piceous. Basal membrane reddish. Basal cell about three times as long as wide. The fusion of the radial vein with ulnar vein is about two-thirds as long as the basal cell. Apical cells eight. Venation reddish ochraceous with the apical half fuscous. Wings with the veins and margins of the claval area infuscated. Venation reddish ochraceous with the apical half fuscous.

Body beneath ochraceous. Face black, deeply and longitudinally sulcate in the middle with a spot at base and the lateral and anterior margins ochraceous. Spots between the face and eyes, disc of cheeks, longitudinal streaks on legs, mesosternite, base of opercula, and a large spot in the middle of the second abdominal ventrite, black. Rostrum and the four median spots on abdomen beneath piceous.

Opercula not reaching the posterior margin of the second abdominal ventrite with the outer margin sinuate near base, posterior margin convex, and the angles rounded. The general shape of opercula is similar to that of *M. radiator*, but the posterior margin more convex and the inner angles less pointed. Rostrum just passing the middle coxæ. Seventh ventrite shorter than the preceding three united. Genital plate globose.

Body length 21 mm. Tegmina length 25 mm. Widest part of pronotum 8 mm.

Holotype male from Hung Djen Djen, Shansi, in Harvard collection. This insect is dedicated to its collector, Prof. Wulsin of Harvard.

#### Four Other New Oriental Species

##### PLATYPLEURA INTERMEDIA spec. nov.

These insects combine the characters of *P. subrufa* Walker (Distant, *Mon. Orient. Cicad.* 1892, p. 9) and *P. octoguttata* Fabricius. The markings of the tegmina are those of the latter while the prominent lateral angulation of the pronotum and the markings of the body above are similar to those of the former. There are also two small spots on the pronotum as in *octoguttata* but very obscure.

Body length 27 mm. Widest part of pronotum 15 mm. Tegmina 34 mm.

Holotype male from Poffua, Ceylon. Two paratypic males from the same locality.

## PYCNA MINOR spec. nov.

## Plate 1, Fig. 5

Markings on the tegmina and wings very close to *P. repanda* but differing from it by having the anal area of the wing entirely ochraceous, rostrum reaching the posterior margin of opercula, size much smaller, and body thickly covered with long hairs.

Head strongly declivous in front, three-fifths as long as the space between the eyes, and including the eyes a little narrower than the base of mesonotum. Vertex long pilose, suffused with brown, longitudinally sulcate in the middle, and with a faint darker transverse fascia between the eyes. Tylus with the anterior margin paler. Antennæ brown. Eyes dark grey, shining, and embedded between the lateral margins of the pronotum and the anterior lateral margin of vertex. Ocelli shining red and about twice as far from the eyes as from each other.

Pronotum dull brown with an obscure central longitudinal fascia and the lateral marginal areas darker, slightly longer than the head, shorter than mesonotum, nearly three times as wide as long, and with the lateral margins amplified and angulated in the middle. Mesonotum dull brown with the faint markings more or less similar to those of *repanda*, namely; four obconical broad fasciæ from the anterior margin (the middle two shortest and the lateral two reaching the cruciform elevation) and a central longitudinal pointed fascia from the cruciform elevation reaching almost to the anterior margin.

Abdomen shorter than the anterior half of the body, abruptly pointed behind, with the eighth tergite longer than the preceding one and the anal tergite sharply pointed; long pilose; black with the posterior margins of tergites 3-5 paler. Anal tergite shining. Tympanal orifice completely covered. Flaps piceous.

Tegmina nearly three times as long as wide. Costal membrane dilated and arched. Basal cell broadly triangular. Venation greenish-ochraceous with the apical half warm ochraceous. Basal membrane blackish with the posterior margin white. Markings as shown in the figure. Wings ochraceous with the apical margin hyaline and a large apical spot fuscous.

Body beneath paler and long pilose. Face longitudinally sulcate in the middle, the lateral transverse striations pale. Legs and rostrum reddish brown. Opercula and abdomen beneath pale castaneous. Margins of opercula paler.

Rostrum passing the posterior coxæ, but far from the posterior



margin of the opercula. Opercula broad and transverse, passing a little over the second ventrite with the outer margin convex, posterior margins slightly oblique and convex, and the inner angles overlapping. Seventh ventrite broadly triangular, sunken and wrinkled on the posterior two-thirds, and longer than the preceding two united. Lateral areas of the eighth tergite pulverulent.

Body length 19 mm. Widest part of pronotum 11 mm. Tegmina length 29 mm.

Holotype male from Koolloo, India (Carleton). Paratypes one male and three females from the same locality.

While the characters in *repanda* tend to be variable, those in the present species are apparently constant.

#### PLATYLOMIA MACULATA spec. nov.

A large cicada, uniformly dark castaneous, body above and the anterior half beneath thickly pilose, abdomen beneath glabrous. Closely allied to *P. ficulnea* Distant (*Mon. Orient. Cicad.*, 1892, p. 102), especially by the markings of the tegmina, which are similar in both, but differing from it by the shape and length of the opercula, the length of the rostrum, shape and opacity of the basal cell, the prominence of the eyes, etc.

Head declivous in front, shorter than the space between eyes, wider (including eyes) than the base of mesonotum, and with the lateral markings more or less in a straight line with the eyes. Eyes prominent, projecting, and with the posterior margin fringed with long hairs. Ocelli shining red and more than twice as far from the eyes as from each others. Tylus fairly prominent.

Pronotum longer than head but shorter than mesonotum. Lateral margins prominently and sharply toothed in the middle. Incisural areas and posterior marginal area roughly wrinkled. The anterior lateral marginal areas covered with appressed, shining golden hairs. These pilose areas appear to be connected by a broad stripe across the face. Mesonotum with the lateral margins and the region before the cruciform elevation covered with long golden hairs. The region before the cruciform elevation encloses two small circular spots. The top of the elevation and its arms glabrous and shining.

Abdomen longer than the anterior half of the body, thickly pilose, second tergite the longest, sixth the shortest, eighth a little longer than the preceding one, narrowed posteriorly, and truncated behind, anal

tergite pointed and hardly visible from above. Tympanal orifice completely covered.

Tegmina pale brownish smoky. Venation partly dark fuscous and partly paler. Basal cell almost opaque and more than three times as long as wide. Basal membrane dark piceous. Cross-veins of apical cells 1, 2, 3, 4, 5, and 7 heavily infuscated. A series of six small fuscous spots just behind the ambient vein.

Face rather prominent. Rostrum nearly reaching the posterior margin of the first abdominal ventrite. Opercula reaching behind the fourth ventrite (the third one of Distant), concavely sinuate near the base, broadly pointed at the apex, and widely separated from each other. The space between the opercula is more than the width of the operculum at its broadest part. Legs faintly and broadly annulated.

Body length 48 mm. Widest part of pronotum 15 mm. Tegmina length 50 mm., width 16 mm.

Holotype male from Tumlong, Sikkim. A male from Langkat, Sumatra, and a female from Baran River, Borneo are much paler in color and in the female the face is almost glabrous with a central longitudinal fascia which is yellowish but they may belong to this species.

#### TERPNOSIA NEOCOLLINA spec. nov.

##### Plate 1, Fig. 6

A small brown slender and elongate cicada with abdomen about one-half longer than the anterior half of the body and allied to *T. collina* Distant (Ann. Mag. Nat. Hist., (6), I, 1888, p. 371) by the absence of maculate spots on tegmina and by the shape and size of opercula. Body above nearly glabrous.

Head slightly declivous in front, shorter than the space between eyes, and including eyes about as wide as the base of mesonotum. Vertex reddish brown with a large central black spot on the ocellar region and three smaller black spots on each of the lateral areas. Tylus reddish brown with a spot at the apex ochraceous and the lateral transverse striations black. Antennæ dark fuscous with the basal segment reddish ochraceous and the base of the third segment paler. Eyes shining ochraceous, projecting, and with the posterior margin black. Ocelli shining ochraceous and about twice as far from the eyes as from each other.

Pronotum reddish brown with the lateral and posterior marginal areas and the central longitudinal lanceolate fascia reddish ochraceous and the following markings dark fuscous:—a longitudinal fascia on

each side of the central area, two oblique stripes on each of the incisural areas, the outer incisure, two spots near the posterior angle (connected with the outer margin of the incisural area), and the extreme posterior margin. Lateral margins deflected and posterior angles dilated. It is shorter than mesonotum (excluding cruciform elevation), narrowed anteriorly, and more than twice as wide as long.

Mesonotum reddish ochraceous with seven fasciæ from the anterior margin and two small spots in front of the cruciform elevation black. Of the seven fasciæ, the central one and the outmost pair reach the cruciform elevation. The pair next to the central one curved inward. The pair next to the outmost ones very small.

Abdomen (15 mm.) one-half longer than the anterior half of the body, gradually attenuated posteriorly, and suddenly constricted on the eighth segment. Tympanal flaps about one-third as long as the orifice, piceous black with a small basal spot ochraceous. Abdomen above reddish ochraceous with the first tergite black, two series of spots on tergites 3 to 6, and tergites 7 and 8, fuscous. Eighth tergite about as long as the preceding one. Anal segment prominent. Anal tergite indented in the middle on the posterior margin and extending as far as the genital plate.

Tegmina and wings hyaline. Tegmina a little more than three times as long as wide and wider than the wing. Basal cell elongate. Venation dark brown. Anal vein ochraceous. Venation of wings dark brown.

Body beneath with the anterior half thickly covered with appressed short pile. Face moderately prominent, globose, ochraceous with longitudinal lateral fasciæ black. The outer marginal part of these black fasciæ interrupted by a series of ochraceous stripes. A spot on lora, a large spot on clypeus, a spot beneath eyes (extending to face), black. Apex of rostrum, tarsi, outer extreme margin of opercula, streaks on anterior femora, lower part of tibiæ, reddish. Abdominal ventrites piceous but the second one dark castaneous.

Opercula not reaching the posterior margin of the second abdominal ventrite, narrow, short, oblique, widely separated from each other, and with the posterior angles rounded. Rostrum reaching the posterior coxæ. Seventh ventrite oblique, sinuate laterally, slightly sinuate behind, and shorter than the preceding one. Genital plate rounded behind, a little longer than the preceding one, dark ochraceous, with a central longitudinal fascia piceous.

Body length 24 mm. Widest part of pronotum 7 mm. Tegmina length 28 mm.

Holotype male from Mt. Angka, Siam (Asiatic Primate Expedition).

EXPLANATION OF PLATES

PLATE 1

PLATE 1

- Fig. 1. *Pyena repanda* Linnaeus
- Fig. 2. *Platypleura kœmpferi* Fabricius
- Fig. 3. *Platypleura retracta* Liu
- Fig. 4. *Platypleura hilpa* Walker
- Fig. 5. *Pyena minor* Liu
- Fig. 6. *Terpnosia neocollina* Liu

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PLATE 2

PLATE 2

- Fig. 7. *Polyneura ducalis* Westwood
- Fig. 8. *Graptosaltria tienta* Karsch
- Fig. 9. *Graptosaltria colorata* Stal, female
- Fig. 10. *Graptosaltria colorata* Stal, male
- Fig. 11. *Gæana maculata* Drury
- Fig. 12. *Gæana maculata distanti* Liu

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PLATE 3

PLATE 3

- Fig. 13. *Cryptotympana mandarina* Distant
- Fig. 14. *Cryptotympana pustulata* Fabricius
- Fig. 15. *Chremistica banksi* Liu
- Fig. 16. *Oncotympana maculaticollis* Motschulsky
- Fig. 17. *Pomponia fusca* Olivier

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PLATE 4



PLATE 4

- Fig. 18. *Lyristes flammata* Distant
- Fig. 19. *Lyristes sinensis* Distant
- Fig. 20. *Purana clavohyalina* Liu
- Fig. 21. *Maua fukienensis* Liu
- Fig. 22. *Tanna obliqua* Liu
- Fig. 23. *Tanna japonensis* Distant

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PLATE 5

PLATE 5

- Fig. 24. *Dundubia bifasciata* Liu
- Fig. 25. *Dundubia mannifera* Linnaeus
- Fig. 26. *Platylomia kingvosana* Liu
- Fig. 27. *Meimuna neomongolica* Liu
- Fig. 28. *Meimuna opalifera* Walker

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PLATE 6

PLATE 6

- Fig. 29. *Huechys sanguinea* Degeer
- Fig. 30. *Huechys hæmatica* Distant
- Fig. 31. *Scieroptera splendidula* Fabricius
- Fig. 32. *Mogannia cyanea* Walker
- Fig. 33. *Mogannia cyanea yungshienensis* Liu
- Fig. 34. *Mogannia hebes* Walker
- Fig. 35. *Lycurgus subvitta* Walker
- Fig. 36. *Terpnosia andersoni* Distant
- Fig. 37. *Melampsalta neocruentata* Liu



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PLATE 7

PLATE 7

- Fig. 38. *Melampsalta wulsini* Liu
- Fig. 39. *Melampsalta radiator* Uhler
- Fig. 40. *Melampsalta bifuscata* Liu
- Fig. 41. *Lisu neokanagana* Liu
- Fig. 42. *Terpnosia obscura* Liu
- Fig. 43. *Terpnosia ichangensis* Liu

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